Data Sheet (Cat.No.T1512)

TargetMol

Rizatriptan benzoate

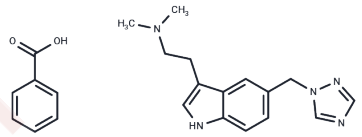
Chemical Properties

CAS No. : 145202-66-0

Formula: C22H25N5O2

Molecular Weight: 391.47

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Rizatriptan benzoate (MK-462 Benzoate) selectively binds to and activates serotonin (5-HT) 1B receptors and 5-HT 1D receptors providing relief of migraine headaches.
Targets(IC50)	5-HT Receptor
In vivo	Rizatriptan blocks neurogenic vasodilation via an action on 5-HT(1D) receptors located on perivascular trigeminal nerves to inhibit CGRP release in anaesthetized guinea-pigs. Rizatriptan evokes a transient reduction in dural blood vessel diameter which recovered to baseline values within 10?min in anaesthetized guinea-pigs. [1] Rizatriptan significantly inhibits dural plasma protein extravasation produced by high intensity electrical stimulation of the trigeminal ganglion. Rizatriptan significantly reduces electrically stimulated dural vasodilation in anaesthetised rats. [2] Rizatriptan Benzoate significantly reduced SP mRNA levels in the midbrains of normal and model group rats, indicating that Rizatriptan Benzoate can downregulate SP gene expression in the rat midbrain. Rizatriptan Benzoate significantly reduces midbrain PENK mRNA expression, decreasing the levels of midbrain met-enkephalin and leu-enkephalin, and thereby weakening the analgesic effects of the endogenous pain modulatory system in rat model of migraine. [3] Rizatriptan Benzoate leads to the number of Fos-like immunoreactive neurons decreased in the spinal trigeminal nucleus caudal partand raphe magnus nucleus, increased the number of Fos-like immunoreactive neurons in the periaqueductal gray and remained unchanged in the ventromedial hypothalamic nucleus and mediodorsal thalamus nucleus in conscious rats. [4] Rizatriptan Benzoate markedly reduces the number of head-flicks in the rats. Rizatriptan Benzoate also significantly reduces the duration of grooming behavior by nearly 2-fold when compared with that without treatment. [5]

Solubility Information

Solubility	DMSO: 16.67 mg/mL (42.58 mM),Sonication is recommended. H2O: 39.2 mg/mL (100.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.11 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.*

In vivo Formulation	*Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5545 mL	12.7724 mL	25.5447 mL
5 mM	0.5109 mL	2.5545 mL	5.1089 mL
10 mM	0.2554 mL	1.2772 mL	2.5545 mL
50 mM	0.0511 mL	0.2554 mL	0.5109 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Williamson DJ, et al. Br J Pharmacol,2001, 133(7), 1029-1034.
Williamson DJ, et al. Eur J Pharmacol,1997, 328(1), 61-64.
Yao G, et al. Neural Regen Res,2012, 7(2), 131-135.
Wang X, et al. Brain Res, 2011, 1367, 340-346.
Dong Z, et al. Brain Res,2011, 1368, 151-158.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481